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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------|------------------|
| 10/070,231 | 02/28/2002 | David Eric Appleford | BAR 117 P2 | 9650 |
| 21176 | 7590 | 06/30/2004 | EXAMINER | |
| SUMMA & ALLAN, P.A. 11610 NORTH COMMUNITY HOUSE ROAD SUITE 200 CHARLOTTE, NC 28277 | | | DEBERADINIS, ROBERT L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2836 | |

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/070,231

Applicant(s)

APPLEFORD ET AL.

Examiner

Robert DeBeradinis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-39 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Pri rity under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/28/02.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by LEAN
4,772,806.

Regarding claim 1.

LEAN discloses a method for providing a plurality of retrievable substantially autonomous modules (110), module isolating means (SW, SW', SW''), and a host facility (input system connected to input 111), the host facility providing power to all of the modules;

Isolating at least one module by operation of the module isolating means; and

Removing the isolated at least one module without cutting off the supply of power or control signals to any of the remaining modules of the system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-9, 12, 15-32, 35, 37, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over LEAN 4,772,806 in view of ROCCO 5,299,312.

Regarding claims 2, 3, 15, 16, 17, 24-32, 37, 39.

LEAN discloses the method as claimed in claim 1 wherein the method includes a plurality of sub-systems.

LEAN does not disclose wherein the plurality of sub-systems include a plurality of modules connected in series, the step of isolating the at least one retrievable module by module isolating means not cutting off the supply of power or control signals to the remaining modules.

ROCCO discloses a fault recovery method wherein the method includes a plurality of sub-systems (figure 3, V building, central hub, B building) and wherein the sub-systems include a plurality of modules.

It would have been obvious to one having ordinary skill in the art at the time of this invention to modify the method of claim 1 to include the switching means to isolate modules within a sub-system. The motivation would be isolate a defective series module within the sub-system to maintain sub-system operation.

Regarding claims 4-8, 18-22.

LEAN in view of ROCCO disclose wherein each module based part of the module isolating means includes two switches in series relationship, each switch being on opposite sides of connection means to an electrical load of the module and the host facility based part of the module isolating means includes a switch in each of the two

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electrical connections between the host facility and the modules and wherein the step of isolating at least one module involves the operation of two of said switches.

Regarding claims 9, 12, 23, 35.

LEAN in view of ROCCO disclose the method as claimed in any preceding claim.

LEAN in view of ROCCO is silent as to a disconnectable electrical power connector means having complementary portions of the electrical power connector means.

The Examiner takes official notice. Power connectors are well known in the art. The complementary portions of the power connector means are obvious and necessary parts of a power connector.

It would have been obvious to one having ordinary skill in the art at the time of this invention include in the method a power connector connection. The motivation would be to provide easy disconnection of the module to facilitate the replacement of the module.

Claims 13, 14, 33, 34, 36, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over LEAN 4,772,806 in view of ROCCO 5,299,312 and WEBB 6,005,996.

Regarding claim 13, 14, 33, 34, 36, 38.

LEAN in view of ROCCO disclose the method of claim 2.

LEAN in view of ROCCO is silent as to the system being underwater or on a seabed.

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WEBB teaches a branching unit to route power around a fault wherein the branching unit is underwater (columns 1, 2).

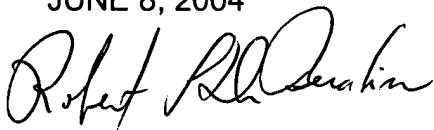
It would have been obvious to one having ordinary skill in the art at the time of this invention to modify an underwater system that includes sub-systems to have the switching means to isolate a fault. The motivation would be to maintain system operation during the repair time.

Any inquiry concerning this communication should be directed to Robert L. DeBeradinis whose number is (571) 272-2049. The Examiner can normally be reached Monday-Friday from 8:30 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Brian Sircus, can be reached on (571) 272-2058. The Fax phone number for this Group is (703) 872-9306.

RLD

JUNE 8, 2004

A handwritten signature in black ink, appearing to read "Robert L. DeBeradinis", written in a cursive style.